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Local use of herbs in Vojvodina and South Great Plain

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Good neighbours ***creating*** **common future**

CONTENT

Preface

This Monograph is a result of activities conducted under the project „ A New Approach in Rural Ethno- and Ecotourism: Capacity and Competence Development" (abbreviation AREeCcDev, Project ID: HUSRB / 1602/31/0075). The organizations included in implementation of Project's activities were Faculty of Medicine, University of Novi Sad, Public enterprise "Palić-Ludaš", University of Szeged and Institute of Lowland Forestry and Environment, University of Novi Sad.

Data describing utilization of plants in the studied area (Vojvodina and Great southern plain) were collected and processed. The knowledge about medicinal plants was obtained through 50 field interviews performed among local community. All of the mentioned enables insight into cultural heritage and local traditional usage of plants. Based on comparison of cultural tradition and modern scientific results, the most important data were summarized in collection of Monographs available in three languages, in printed form, as well as online available content. Also, Monograph briefly informs about preservation and horticultural aspects of medicinal plants usage and locally available practice. More details about the three mentioned subjects are also available at the Project's webpage www.ipa-areeccdev.rs

With this Monograph we want to assist in learning how medicinal, cosmetic and nutritional products are being made from traditional herbs and used. New examples of medicinal application, together with garden spas, resorts and green oases significantly widen the tourist profile of this area. This enables the local community to take more important part in development of constantly raising health tourism with preservation of local tradition.

Our goals include development of Ludaš Lake tourist capacity and better integration of local community in tourist sector in order to increase the attractiveness of this locality on the map of ethno-and ecotourism and make it compatible for cross-border cooperation with Hungarian tourist centers (Moraholom).

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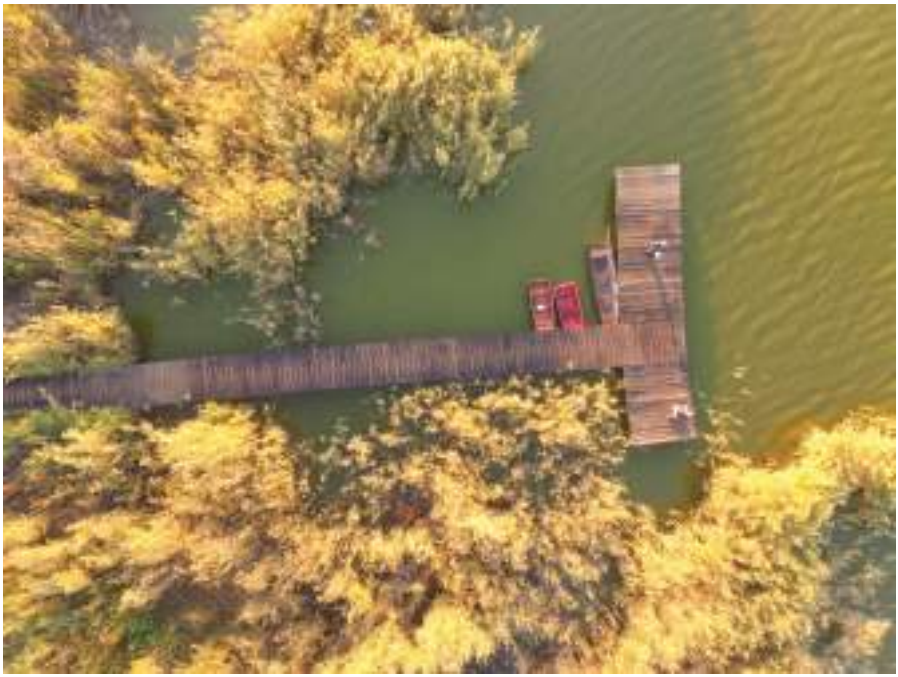


Ludas Lake Special Nature Reserve

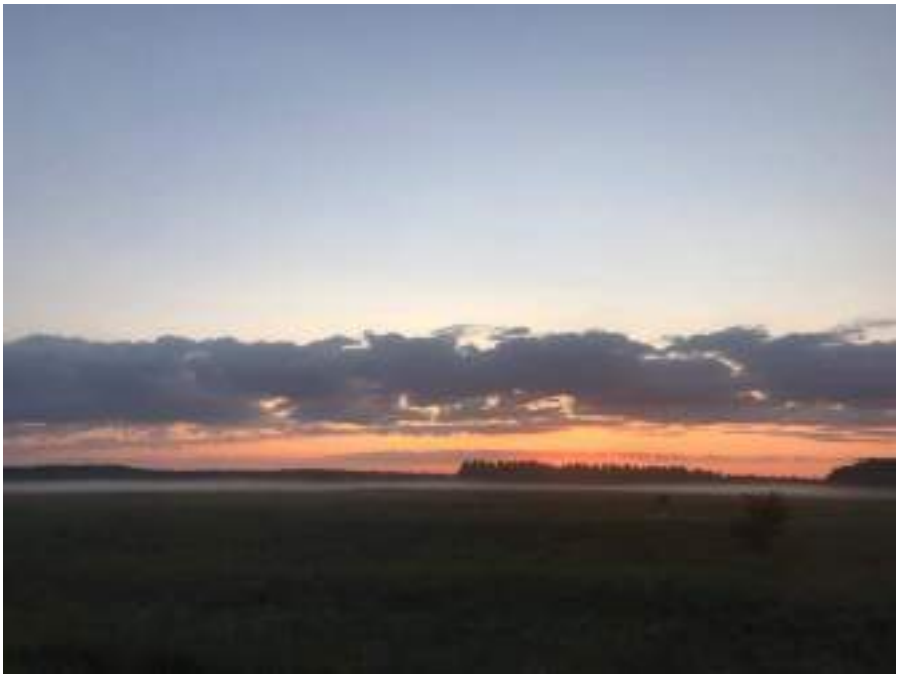
Ludas Lake is located in the northern Vojvodina at the territory of the Subotica Municipality close to the national border with Hungary. The villages of Supljak, Hajdukovo and Nosa are situated on its banks.

Both the Lake and the settlement of the same name on its banks were mentioned as early as in the 16th century under the name 'Ludas' originating from the Hungarian term 'lud' meaning 'goose'.

The first Lake protection measures were introduced back in 1955, yet its today's protection status the Lake obtained in 1994. According to the new Decree passed in 2006, the Ludas Lake Special Nature Reserve covers the area of 847 hectares plus 2002 hectares of the buffer zone. According to its level of protection, the Lake falls into the first category site as a natural asset of significant importance for the Republic. Being also the site of international importance the Reserve was included in the Ramsar List of wetland sites in 1977 (List of Wetlands of International Importance).

The natural asset has been put under the protection in order to conserve wetland ecosystems in sand and steppe habitats characterised by high diversity of both the landscape and the species, relict steppe community and biotope with rare plant and animal species. Ludas Lake is the only representative of shallow semi-static steppe lakes in the Republic of Serbia and a gathering and resting area for migratory birds, because of which it has been designated as a Ramsar site of international impertinence.

Management of this natural asset has been entrusted to the Palic-based "Palic-Ludas" Public Utility Company. Together with its buffer zone, the Lake constitutes a whole covering a total of 2849 hectares.



The Selevenj heath – A Special Natural Reservation

Area: 677 ha

Center: Greenwich coordinates 46°08'37" N-19°53'37" E, Gauss-Krüger coordinates 5111.675-7414.325

The Selevenj heath is located on the borderline of the Subotica-Horgoš sand region and the loess plateau of Bačka. The two geographical units that are in contact belong to an interwoven biodiversity area. The proximity of subsoil water that generates marches and solonchaks, close to the very dry sand habitat, enhance the diversity of the region.

Its floristic significances are various types of orchids and irises. This area of nature reservation is the only or small number of habitat for several rare or endangered plant species in Serbia. A number of internationally significant animal species are also present in this area.

No municipalities have been established on the Selevenj heath between Bački Vinogradi and Horgoš. Only a few farms and homesteads, one tavern and sporadically located orchards indicate the presence of humans. The archeological site in the area, a medieval church called Templompart was discovered during highway construction.

The former grape region was transformed into a region of apple, pear, apricot and peach pomology which exploits the climatic and geological benefits of sand soil. Nowadays, wine-growing is becoming more widespread as well as the pomology of grape species that are used for the production of the traditional Kadarka and Kövidinka (Stone Siller) wines.

Traditional (extensive) animal breeding is not typical any more.

The parts/subunits of the reservation: Volujski pašnjak, Degelica, Bogarzo, Templompart, Selevenjska šuma, Lofej, Traćik, Kilapoš, Stočni pašnjak, Čengeš rampa.

Subotica Sands - Landscape of Outstanding Features

The protected area of the Subotica Sands is located in the far north of Backa, along Serbian Hungarian border, as the part of the Subotica-Horgos Sands. The southern border consists of the peripheral parts of Kelebija, Subotica, Palić, Hajdukovo and Bački Vinogradi settlements.

This area has the character of forest-steppe, with forest complexes, mostly of anthropogenic origin. The natural value is due to the character and mosaic of the habitat, among which sand, steppe and wetland, represent the main feature of the area with a high degree of biodiversity. The most significant wetlands are formed on the basis of lowland peat in the valley of the Kireš River, which are considered to be the rarest and most endangered habitats in Europe and the world.

Among the preserved natural rarities, the relict forest-steppe plant - safflower (Bulbocodium versicolor), outstanding feature of the flora of the Subotica Sands, should be mention, since it is its only site in Vojvodina and Serbia.

The total number of recorded bird species in the area is as high as 170, which is a result of the great diversity of habitats.

The presence of a rare species of rodent - the blind dog (Spalax leucodon), which spends its life underground, in the corridor system, in search of food - grass roots, rhizomes and bulbs, has also been reported. Only a hundred years ago, this species was widespread in Vojvodina, but with the conversion of native steppes into fields, its population has dramatically decreased.

The area of exceptional features of the "Subotica Sands", has been protected since 2003 and classified in the second category of protection as a protected property of national importance. The protection covers an area of 5370 ha + 2773 ha of protected zone.

The original landscape features, created in the interaction of man and nature, have been partially preserved, while in the area and its immediate environment, some forms of traditional economy and life, as well as individual farms, have been retained.

Among significant cultural and historical features that exists in the protected area, seven objects (farms, a school for forestry, a forestry house) and four roadside tombstones have been identified.

Well-known tourist points are the localities of Majdan in Kelebija Forest and Tresetište Lake.

Local use of herbs, nature conservation and horticultural features

(1) Local characteristics of the use of herbs and spices

This study examines local herbal usage patterns, traditional forms of application and opportunities related to this subject around the Ludaš Lake (Special nature reserve "Ludaš Lake") and parts of Landscape of outstanding features "Subotička peščara" and Special nature reserve "Selevenjske pustare", as well as the Southern Great Plain region of Hungary. The purpose of the study, and thus the promotion of the topic, is to inform current and future herb users and to help them identify those diseases that can be prevented and treated at home by the application of herbs in order to reduce unnecessary drug use and current overload of the health system.

According to this study, different groups can be distinguished in terms of herb usage patterns in the region. There are occasional herbal users who practice common uses only when a particular disease occurs. Another group is the group of "tea consumers" who consume herbal teas much more regularly then occasional herbal users, and they often buy herbs from herb shops. Conscious herbal users usually have some kind of pre-qualification, and they typically use herbs not only as tea but also more widely. They usually get herbs from their own cultivation or by collecting them from nature. Generally speaking, it can be said that people who use herbs tend to be more holistic and focus on disease prevention more like people who do not use herbs. In their case, the treatment of the body is a more patient and more conscious process that gives time for the alternative treatment which is often slower but has a longer lasting effect than other types of cures.

According to this study in today's world, where the flow of information is much faster than ever before and the direction of it is almost untraceable, the scientific substantiation of folk medicine experience can truly validate the use of herbs, thereby creating a single integrated knowledge that improves the shortcomings of view of both folk medicine and scientific observations. It is important to note that the transfer of knowledge related to herbs not only preserves traditions but also helps to construct a healthier value system, a more conscious lifestyle and greener households.

The growing popularity of ecotourism, informative courses, family programs related to the use of herbs and the involvement of the older generation can all provide an excellent opportunity to raise awareness.

Programs organized through projects integrating folk herbal use and science can greatly help build new community relationships, create a variety of forums about

healthy lifestyles, and create a new, viable pattern of behavior that can maintain and restore our health and balance with our planet.

(2) Collecting native herbs in protected areas, their role in ecosystem service and ecotourism

Of the ecosystem services, herbs collected in their natural habitats are primarily part of the provisioning services, but the collection itself can be classified as a cultural service.

When collecting herbs, it is important to know the plant species and the area from which you intend to collect them. Particular attention should be paid to protected or toxic plant species and protected areas.

The legal background of collection

In all areas, the owner or the managers of the land have the right to collect the natural assets. The collection of wild mushrooms, herbs, wild fruits by others requires the consent of the owner or manager of the area.

In the case of forests, the collection requires the consent of the forest manager. An exception to this is the collection for individual needs in unprotected state forests. Here the collectable amount is 2 kg/person/day, which may not be marketed.

In the case of protected natural areas, it must be ascertained whether the site is open for visitation and the collection must be authorized by the nature conservation authority.

Nature conservation issues of collection and their mitigation

Nature conservation issues are disturbing the habitat, trampling, collecting too much herbs or mixing up similar species.

Disturbance is a problem especially during the breeding season, because the parent bird may leave the nest and stop feeding. If the bird is showing signs of distress to our presence (the bird makes alarm calls, distraction, or flies away, but sticks to the place), then we must leave the area. Be careful not to step on protected plants, animals or bird nests. If you see that there is a path somewhere where vegetation disappears completely, do not use it.

The rate of the collection must not result the decline of the local plant population. This amount may vary from species to species and from year to year. For more sensitive species this must be determined by a specialist. Do not collect protected plants or poisonous plants. Thorough knowledge of plant species is required.

The process of collection

Collecting should not harm the environment. Collect the amount that is actually used. Collecting for private purposes and using the herbs at home requires a lot of knowledge. Knowledge required for safe collection: identification of the desired plant, identification of similar (possibly toxic) species, knowledge of non-harvestable plants. It is important to know if the collection site is free from environmental pollution. We need to know when to collect the herbs (season, time of day) and which part of the plant can be used. Collecting the roots of herbs is forbidden! In addition, knowledge of the effects and treatment of the herb is essential.

Collecting for private purposes in smaller groups is an effective and safe way of collecting and using herbs, if the team is accompanied by a specialist. Collection for business purposes is subject to special regulations.

(3) Cultivation of the most important medicinal plants and herbs in home gardens in the Southern Great Plain

The study provides some basic information on plant propagation (eg vegetative and seed propagation).

Indigenous, wild herbs

These species are usually collected in their natural habitat, but several species can be propagated and cultivated in the home gardesn. So they can be used anytime, in fresh condition. The study provides information and advice on the keeping of the following species in the home gardens:

Small-leaved linden *(Tilia cordata Mill.*), large-leaved linden *(Tilia platyphyllos* Scop.), black elder *(Sambucus nigra L.)*, single-hawthorn *(Crataegus monogyna* Jacq.), double-hawthorn *(Crataegus laevigata* (Poir.) DC), common juniper *(Juniperus communis* L.), common birch *(Betula pendula* Roth.), wild roses (*Rosa spp*.), lawn roses *(Rosa canina* L.), ribwort plantain *(Plantago lanceolata* L.), mountain yarrow *(Achillea collina* Becker), common y arrow (Achillea millefolium L.), chamomile (Matricaria recutita L.), mullein (Verbascum phlomoides L.), common horehound (*Marrubium vulgare* L.), stinging nettle (*Urtica dioica* L.), prickly pearl (Leonurus cardiaca L.), true licorice (Glycyrrhiza glabra L.), marsh mallow (Althaea officinalis L.), comfrey (Symphytum officinale L.), greater celandine (Chelidonim majus L.), St. John's Wort (*Hypericum perforatum* L.), common verbena (*Verbena officinalis* L.), agrimoni (*Agrimonia eupatoria* L.), baby's breath (*Gypsophyla paniculata* L.), common houseleek (*Sempervivum tectorum* L.)

Not indigenous herbs and spices that have been grown for a long time

It is worth keeping them in home gardens, because their cultivation is well established and their needs are well known. Most of them are warm-demanding species coming from the Mediterranean or Asia. Among them, several species such as mint, sage, thyme have related species in the native flora, which also have medicinal compounds or essential oil content. Since their drug has a similar mechanism of effect, it is better to cultivate already existing cultural species in small gardens, since these species and varieties have usually been adapted to domestic conditions and can be well grown. In many cases, their essential oil content and active ingredient content are also higher. In addition, it is much easier to obtain propagating material (seeds, cuttings, seedlings) than for wild species.

The study addresses their habitat needs and care according to taxonomic categories.

(a) Lamiaceae plants with high essential oil content: summer savory (*Satureja hortensis* L.), mountain savory (*Satureja montana* L.), kerti bazsalikom (*Ocimum basilicum* L.), marjoram (*Majorana hortensis* MÖNCH), rosemary (*Rosmarinus officinalis* L.), lavender species (*Lavandula angustifolia és intermedia* L.), lemon balm (*Melissa officinalis* L.), mint species fajok *(Mentha spp.)*, oregano (*Origanum vulgare* L.), hyssop (*Hyssopus officinalis* L.), lemon verbena (*Aloysia citrodora* Palau)

(b) Umbellifers containing essential oil:

Lovage *(Levisticum offfficinale* W.D.J. Koch*)*, coriander *(Coriandrum sativum* L.), fennel *(Foeniculum vulgare* Mill.), anise (*Pimpinella anisum* L.), caraway (*Carum carvi* L.), parsley (*Petroselinum crispum* (Mill.) A.W Hill), dill (*Anethum graveolens* L.)

(c) Other herbs: fenugreek (*Trigonella foenum-graecum* L.)**,** southernwood (*Artemisia abrotanum* L.), tarragon (*Artemisia dracunculus* L.), curry plant (*Helychrisum italicum* (Roth.) G.Don)

Medical plants of vegetable gardens, orchards and ornamental gardens

There are many herbs among the fruit varieties and vegetable plants grown in home gardens. Some food plants have therapeutic effect due to their fiber and vitamin content, but also have other physiological effects. It is important to emphasize that their cultivation and utilization must meet serious standards in order for them to be truly medicinal herbs, since the conditions of cultivation greatly influence their physiological effects.

The study includes cultivation information for the following species

(a) Woody medical plants in the home gardens: walnut *(Juglans regia* L.), sour cherry (*Prunus cerasus* L.), ginkgo (*Ginkgo biloba* L.), sea-buckthorn (*Hippophae rhamnoides* L.), blackcurrant *(Ribes nigrum* L.), lingonberry *(Vaccinium vitis-idaea* L.), goji berry *(Lycium chinensis* L.), common hazel *(Corylus avellana* L.)

(b) Herbeceous medical plants in the vegetable gardens: oil pumpkin *(Cucurbita pepo var. styriaca* L.*)*, soybean *(Glycine max* L. Merr.), peanut *(Arachis hypogaea* L.), castor bean *(Ricinus communis* **L.), opium poppy** *(Papaver somniferum* L.), Jerusalem artichoke *(Helianthus tuberosus* L.), bean *(Phaseolus vulgaris* L.*)*, flax *(Linum usitatissimum* L.*)*, garlic *(Allium sativum* L.*)*, pepper *(Capsicum annuum* L.), onion *(Allium cepa* L.), rhubarb (*Rheum spp.* L.), horseradish (*Armoracia lapathifolia* Gilib.), mustard species (*Sinapis spp. és Brassica spp.)*, pot marigold *(Calendula officinalis* L.), hops *(Humulus lupulus* L.).

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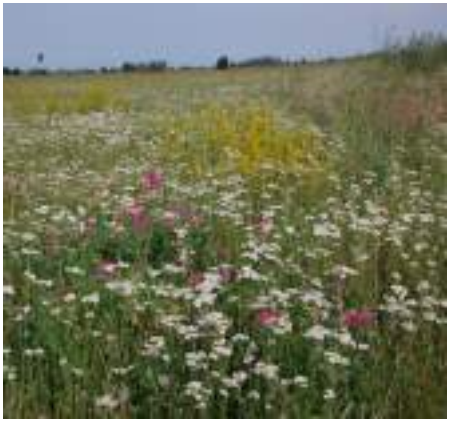
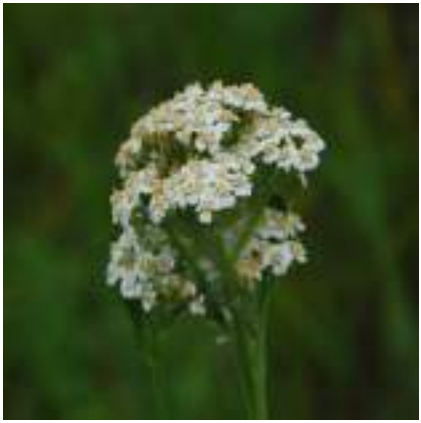




Common Yarrow

Mountain Yarrow

Latin name: *Achillea millefolium* L., common yarrow,
Achillea collina Becker, mountain yarrow

Local names: cickafark, közönséges cickafark, cickafarkkóró, cziczefark, hajdučka trava, hajdučica, sporiš, stolisnik

Habitat, and plant parts used: Yarrow is widespread in Europe, and also in the region covered by IPA project. It grows on dry meadows, pastures and along roadside. It blooms from June to October. Flowering parts, rarely roots of yarrow are used.

Medicinal uses or other uses in the region: Yarrow tea is good for period cramps, stomach ache, indigestion and diarrhea. It has antihemorrhagic, antispasmodic, analgesic and antiinflammatory properties. Tea is also used for cough, sore throat, as a mild sedative and externally to treat wounds. It can be used as sitting bath for urinary tract infection, genital disorders as ovarian infection and hemorrhoids. Addittionaly, yarrow tea is used for gum diseases. Tea made from the roots alleviates hemorrhoid complaints.

Uses in the modern phytotherapy: Herbal medicinal products of yarrow are used for loss of appetite, for the symptomatic treatment of mild, spasmodic gastrointestinal disorders including bloating and flatulence, for the symptomatic treatment of minor spasm associated with menstrual periods and for the treatment of minor superficial wounds.

Horse Chestnut

Latin name: *Aesculus hippocastanum* L., horse chestnut own photosl

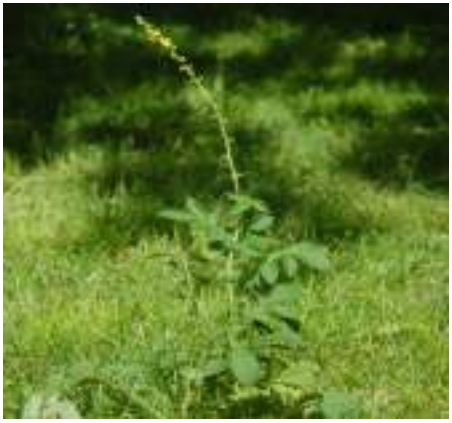
Local names: gesztenye, divlji kesten, gorki kesten, jelo**š**

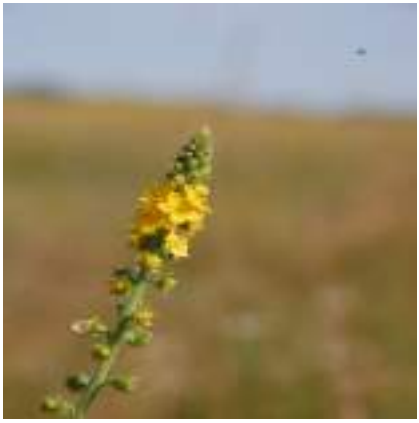
Habitat, and plant parts used: It occurs in mountain forests, as well as in parks and gardens. Chestnut seeds are collected.

Medicinal uses or other uses in the region: When chestnut cotyledones are cooked in milk, they can be used to treat varicose veins internally. Ethanol extract of the whole seeds is used externally for sore feet, and for ointment and cream preparation. It is also used for hair care and hair coloring.

Mode of preparation: Chestnut can be tinctured by first chopping the chestnuts and then soaking it in alcohol. This tincture is used to make a compress for the leg veins.

Uses in the modern phytotherapy: Herbal medicinal product based on horse chestnut are used for the treatment of chronic venous insufficiency, which is characterised by swollen legs, varicose veins, a feeling of heaviness, pain, tiredness, itching, tension and cramps in the calves.





Agrimony

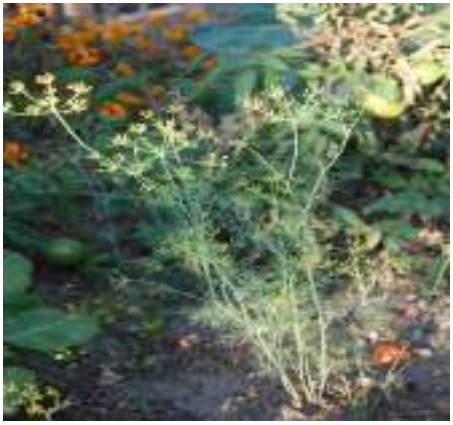
Latin name: *Agrimonia eupatoria* L., agrimony

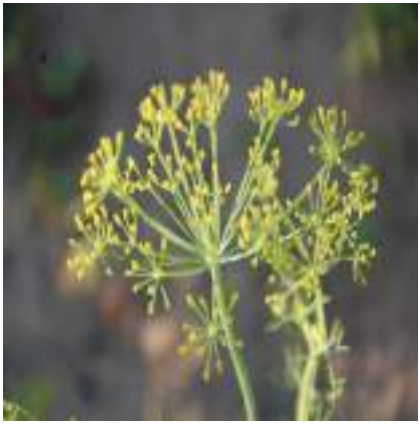
Local names: apróbojtorján, petrovac, ranjenik

Habitat, and plant parts used: Agrimony grows in bushy places, clearings, forest edges, but also in meadows, from June to October. Above-ground flowering parts are collected.

Medicinal uses or other uses in the region: Tea made from agrimony flowers and leaves is recommended for diarrhea, external and internal bleeding and vaginal discharge. Gargling with concentrated solution of agrimony reduces oral inflammation and can be used to treat aphtha.

Uses in the modern phytotherapy: Agrimony can be taken by mouth for the relief of mild diarrhoea, or used as a gargle to relieve mild inflammation of the mouth and throat. It can also be applied to the skin for relief of minor inflammation and small superficial wounds.





Dill

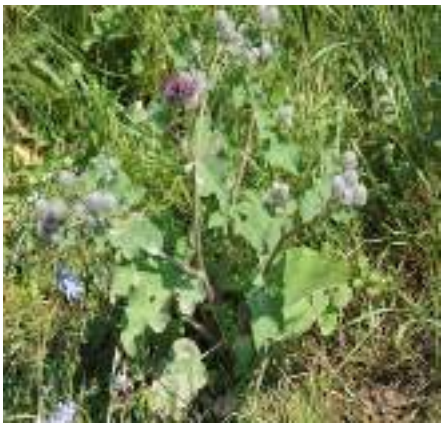
Latin name: *Anethum graveolens* L., dill

Local names: fűszerkapor, kapor, uborkafű, mirođija, kopar

Habitat, and plant parts used: Dill originates from the Mediterranean region and represents a cultivated plant. It is common in gardens and can be propagated by sowing from April. Flowering shoots and fruits are collected.

Medicinal uses or other uses in the region: Dill tea is used to prevent cramps. Leaves are used to lower blood sugar and to flavor food (sauces, pickles).

Uses in the modern phytotherapy: Dill is used for the treatment of dyspepsia, gastritis, flatulence, and stomach ache.



Burdock

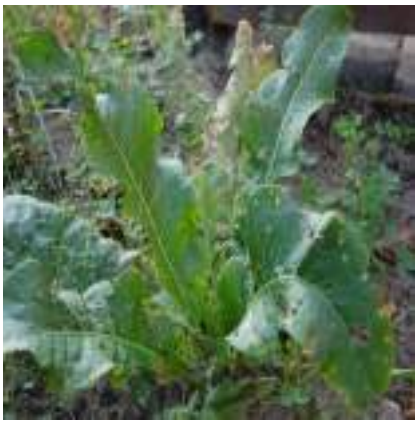
Latin name: *Arctium tomentosum* L., burdock

Local names: bojtorján, lapulevél, keserűlapu, útilapu, szamárkóró, bogáncs, csicskara, čičak, lepuh, repuh

Habitat, and plant parts used: It grows in weedy areas, in nutrient-rich soils. The leaves, roots and seeds are collected.

Medicinal uses or other uses in the region: Tea made from the leaves helps digestion and is used as a gall stone and kidney stone solver, remedy for stomach and liver problems. It is also recommended for diabetes. The root concoction is used externally to strengthen the hair and to prevent hair loss, and against some skin ailments. Its fruits were used as a toys for children. The collected seeds are sown and the 1-2 year old root is collected for medical purposes.

Uses in the modern phytotherapy: Roots are used to increase the amount of urine to achieve flushing of the urinary tract as an adjuvant in minor urinary tract complaints. Roots are traditionally applied in temporary loss of appetite, and for the treatment of seborrhoeic skin conditions and furunculosis.



Horseradish

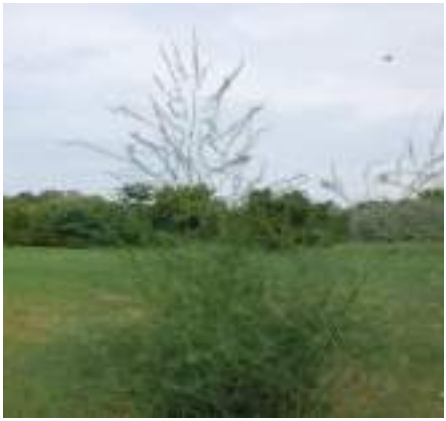
Latin name: *Armoratia rusticana* L., horseradish

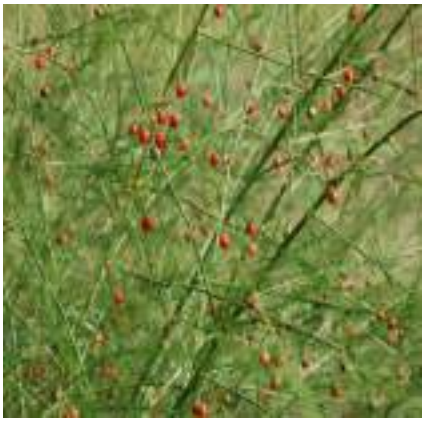
Local names: csípős torma, orrtekerő torma, ren, hren

Habitat, and plant parts used: Although, horseradish can grow in low light, semi-shaded places, it requires a lot of sunlight to form aromatic substances. That is why good quality horseradish grows only in open, sunny places. Fresh roots of horseradish are used.

Medicinal uses or other uses in the region: Horseradish mixed with honey is recommended to cure cough. Due to its strong taste it cleans nasal passages. Grated horseradish can be used to relieve toothache. Horseradish tincture is also effective: grated horseradish is mixed with alcohol and macerated for half a day. It is recommended to apply horseradish tincture as a compress on the occiput in case of severe headaches. Moreover, it can be added to hot foot bath to prevent frostbites or it can be rubbed in.

Uses in the modern phytotherapy: The roots can be used both internally and externally in catarrhs of the respiratory tract, internally as supportive therapy for urinary tract infections and externally for the hyperaemic treatment of minor muscles aches.





Asparagus

Latin name: *Asparagus officinalis* L., asparagus

Local names: homoki spárga, halványított spárga, zöldspárga, nyúlárnyék, divlja špargla, vilina metla

Habitat, and plant parts used: Asparagus is a cultivated plant, but it also occures in the wild. Sowing takes place in the spring, after 1 year of seedling cultivation it is transplanted next spring. After planting, it can be harvested only from the third year, from mid April to mid June. While shoots of asparagus are eaten, roots are used in medicine.

Medicinal uses or other uses in the region: In folk medicine asparagus is primarily known for its diuretic and kidney stone preventing effects. In the region various asparagus dishes are made and consumed. Since 1996. asparagus days and festival have been held in Öttömös every year.

Uses in the modern phytotherapy: The use of asparagus root is approved in irrigation therapy for inflammatory diseases of the urinary tract and for prevention of kidney stones. Traditionally, the root has been used as diuretic, laxative, and to treat neuritis and rheumatism. Asparagus is most often used as a food, although it is believed to have diuretic properties.

Birch

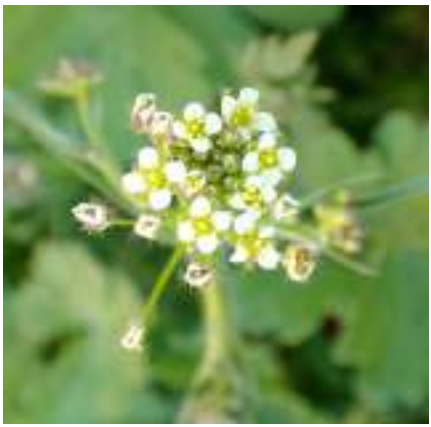
Latin name: *Betula pendula* Roth., birch

Local names: nyírfa, obična breza, bela breza

Habitat, and plant parts used: Birch grows on forest edges, in deciduous forests, in abandoned areas, in wet places. It can also be found on the acidic, sandy soil of the Great Plain. Birch juice (the sap that leaks when the bark of young trees is cut) is collected in March, its leaves in June and July.

Medicinal uses or other uses in the region: Birch juice has a regenerative effect, when rubbed into the scalp it can prevent dandruff. Tea made from the leaves has diuretic, antihypertensive and antirheumatic effects. Bark is considered to have analgesic and antipyretic properties.

Uses in the modern phytotherapy: Herbal medicinal products based on birch leaf are used to increase the amount of urine in order to achieve flushing of the urinary tract as an adjuvant in minor urinary complaints.



Shepherd's Purse

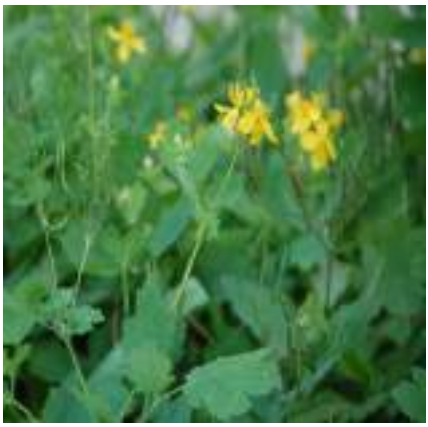
Latin name: *Capsella bursa pastoris* L., shepherd's purse

Local names: pásztortáska, hoću-neću, tarčužak

Habitat, and plant parts used: It is an undemanding plant that can grow in gardens, fields, urban areas, along the roadside, along embankments. It blooms all summer, but predominates in April and May. Its flowering sprouts are harvested in March-May.

Medicinal uses or other uses in the region: It has hemostatic and diuretic effects. It is also used against nervousness, liver diseases and arteriosclerosis. The leaf is eaten as a spring salad. Shepherd's purse herb is also used for preparing spray against plant pests.

Uses in the modern phytotherapy: Internally, sepherd's purse is used for the symptomatic treatment of mild menorrhagia and metrorrhagia and topically for nose bleeds. Externally, it is applied to treat superficial, bleeding skin injuries.



Greater Celandine

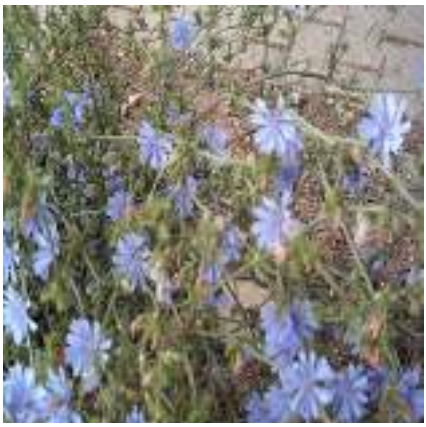
Latin name: *Chelidonium majus* L., greater celandine

Local names: vérehulló fecskefű, rusa, rosopas

Habitat, and plant parts used: Celandine is a common weed found on forest edges, black locust plantations, fallow land, fences, gardens and around buildings. It blooms from April to October. Aboveground flowering parts are collected, or fresh, yellow to orange latex is used.

Medicinal uses or other uses in the region: Externally, orange latex from the freshly broken stalk is used to treat corns, warts, freckles, rashes, hardening of the skin and stings. The wart disappears after 1-2 months of treatment. It can also be used to treat eczema and helps wound healing.

Uses in the modern phytotherapy: Greater celandine preparations are used for epigastric discomfort and for the treatment of superficial warts of viral origin.



Cichory

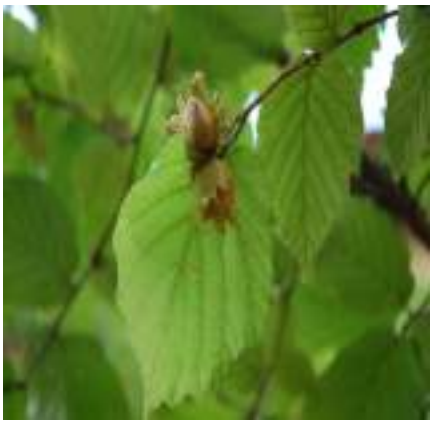
Latin name: *Cichorium intybus* L.

Local names: mezei katáng gyökér, vodopija, ženetrga

Habitat, and plant parts used: Cichory is widespread in the region. It grows along roads, in lowlands, embankments and fields. The root is used in phytotherapy. It is harvested in the fall when it is being the thickest and containing the highest amount of medicinal ingredients.

Medicinal uses or other uses in the region: The root of cichory is used, more in traditional medicine, as a non-toxic, bitter drug for the treatment of digestive organs, especially, to strengthen the appetite, stomach, to improve digestion and secretion of urine and bile. Cichory is also grown as a vegetable, leaves are used as a salad, and root, roasted and ground, as a substitute for coffee. Also, the roots of cichory and other plants of the Asteraceae family contain inulin, the fructose polymer. Inulin is a prebiotic, which is not digested or absorbed in the intestines, and is therefore used to produce dietary supplements and food created for diabetics.

Uses in the modern phytotherapy: Traditional herbal medicinal products of cichory are used for the relief of symptoms related to mild digestive disorders (such as feeling of abdominal fullness, flatulence and slow digestion) and temporary loss of appetite.



Common hazel

Latin name: *Corylus avellana* L., common hazel

Local names: közönséges mogyoró, törökmogyoró, leska

Habitat, and plant parts used: It occurs on the edge of fresh deciduous forests and in dry oak forests. Its leaves are harvested from August to November, its catkins from February to April and ripe fruits in October.

Medicinal uses or other uses in the region: Tea made from leaves has astringent, antiinflammatory, diaphoretic and diuretic effects. Internally, it can be used for enteritis, externally for eczema. It is used as a sitting bath for hemorrhoids and for the treatment of varicose veins. Its catkin tea is believed to strengthen the lungs and alleviate potency in men.

Uses in the modern phytotherapy: Leaf of common hazel is used as antihaemorrhoidal, antiinflammatory, tissue regenaration inducing (wound healing) drug.

Couch Grass

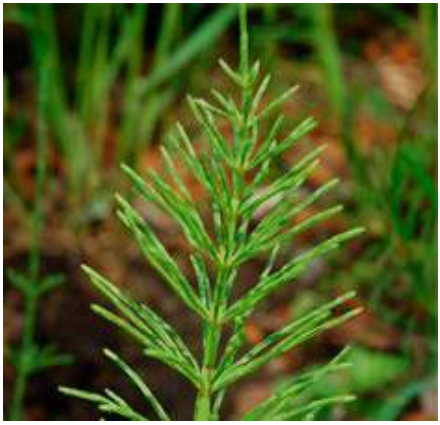
Latin name: *Elymus repens* (L.) Gould, couch grass

Local names: tarackbúza, pirevina

Habitat, and plant parts used: Common in fallows, gardens, beaches, baulks and grasslands. The rhizoma is used in phytoterapy. It can be exploited early in spring or late in the autumn.

Medicinal uses or other uses in the region: The couch grass root has a blood-glucose-lowering and diuretic effect. It is used for rheumatic complaints. It can be applied externally to exfoliate skin with acne.

Uses in the modern phytotherapy: Couch grass medicinal products are used to increase the amount of urine, to achieve flushing of the urinary tract, as an adjuvant in minor urinary complaints.



Field Horsetail

Latin name: *Equisetum arvense* L., field horsetail

Local names: mezei zsurló, bábarokka, vesefű, súroló, rastavić, preslica

Habitat, and plant parts used: It spreads on wet fields, meadows, often as weed. The infertile shoots that appear in May are collected. They are harvested on arable land, and on hay meadows before mowing, using above-ground parts of the plant (infertile shoot).

Medicinal uses or other uses in the region: It has diuretic effect, improves heart function and relieves rheumatic complaints.

Uses in the modern phytotherapy: Horsetail herb preparations can be used in minor problems affecting the urinary tract to increase the production of urine in order to achieve flushing of the urinary tract. Horsetail herb preparations can also be used for the treatment of superficial wounds.

Clivers

Latin name: *Galium aparine* L., clivers

Local names: ragadós galaj, prilepača, divlji broć

Habitat, and plant parts used: Clivers are widespread throughout the region covered by IPA project, it occurs along alleyways, acacia trees, in groves, and in sowings. Roots can be harvested in March while flowering parts in May.

Medicinal uses or other uses in the region: Clivers tea is considered to show a beneficial effect on the lymphatic glands, it is used in liver and kidney diseases. Besides, clivers tea exerts sedative and antihypertensive effect. It is used externally to treat skin conditions. Clivers are consumed in smoothies, sandwich cream, cream soup.

Uses in the modern phytotherapy: Cliver has mild adstringent and diuretic activity, but it is not used in the modern phytotherapy.

Liquorice

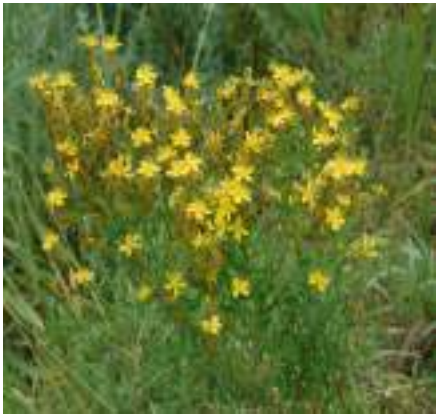
Latin name: *Glycyrrhiza glabra* L., liquorice

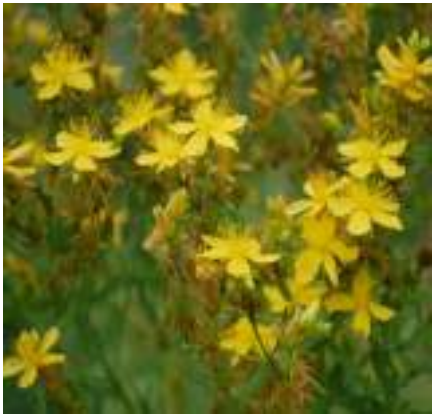
Local names: keserű édesgyökér, édesfa, slatki koren, sladić

Habitat, and plant parts used: It is a perennial plant of arable land edges, pasture, fallow land, native to Southern Europe. It is cultivated in the Great Plain, where often appears in wild. Its roots are collected.

Medicinal uses or other uses in the region: It is recommended as a daily tea against cough. It breaks the mucus adhering to the lungs and helps cough. It is considered to be very effective in relieving gastritis. It is also used as a sweetener to flavor unpleasant herbal teas. In the past, its root was chewed for its sweet taste.

Uses in the modern phytotherapy: Liquorice root is stated to possess expectorant, demulcent, antispasmodic, antiinflammatory and laxative properties. It is used for bronchial catarrh, bronchitis, chronic gastritis, and peptic ulcer.





St. John's Wort

Latin name: *Hypericum perforatum* L., St. John's Wort

Local names: orbáncfű, pettyes orbáncfű, lyukaslevelű orbáncfű, csengőlinka, kantarion, Bogorodičina trava

Habitat, and plant parts used: It occurs in oak and pine forests, forest edges and clearings, in chestnut groves, tall-herb meadows, flooded plains and ditches. Flowering sprouts are harvested in June and July.

Medicinal uses or other uses in the region: Tea is used as a sedative, sleep aid and to relieve nervousness, but also as an antidepressant and mood improving agent. The flower shoot is macerated in oil and the oily extract is used to treat skin problems, wounds, burns and to reduce wrinkles. St. John´s wort is recommended for women in menopause to treat mood changes. Avoid sunbathing when using tea and oily extract because certain substances of the plant apsorb UV light in great extent which may cause severe dermatitis and burns (photosensitizer!).

Uses in the modern phytotherapy: Herbal medicinal products based on St. John's Wort are used for the treatment of mild to moderate depressive disorders.

Common walnut

Latin name: *Juglans regia* L., common walnut

Local names: diófa, dió, orah

Habitat, and plant parts used: It occurs in mountain forests in the Upper Tisza region. As a popular cultivated plant, it is often planted in courtyards. Its leaves are collected from July to August.

Medicinal uses or other uses in the region: Leaf tea is used as a mild antiinflammatory, antidiarrheal and antiinfective agent. Externally, it has a wound-tightening effect and is a hemostatic. The leaf tea is used as a compress for eczema, acne, wounds, ulcers and hemorrhoids. The leaves are also recommended for skin diseases (e.g. psoriasis), to be placed directly on the patient's skin. Also, due to the present pigments, it can be used for coloring dark hair. The green husk prepared as a tea has an appetite enhancing effect.

Mode of preparation: The „orahovača" preparation, well known in Vojvodina, is prepared as follows: The green fruit of the walnut is harvested in June, halved and quartered, filling a 5 liter jar upto ¼ part. After that, cinnamon, cloves, lemon peel, orange peel and cognac are added. After allowing to stand for 40 days, pour off the liquid and add honey. It is recommended to consume 30 ml per day on an empty stomach to regulate thyroid function.

Uses in the modern phytotherapy: Medicinal products are used for the relief of minor inflammatory conditions of the skin, and also in treatment of excessive perspiration of hands and feet.

Common Juniper

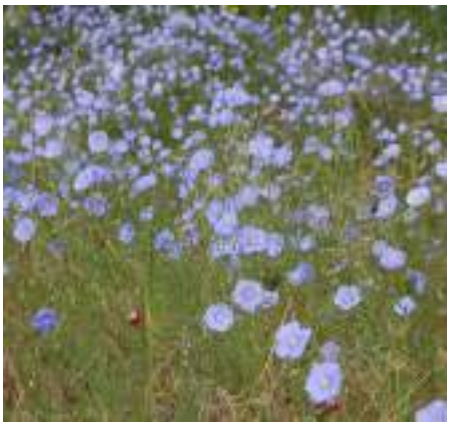
Latin name: *Juniperus communis* L., common juniper

Local names: boróka, aprófenyő, gúzsfenyő, borovicskafenyő, borsfenyő, gyalogfenyő, borók, buroka, kleka, venja

Habitat, and plant parts used: It is a wild plant of lean grasslands, junipers, rocky slopes, rock lawns, pine forests. The berries are collected when ripe, dark purple in colour, usually every second year, in August or September.

Medicinal uses or other uses in the region: Juniper berries are an essential oil-containing spice, appetite enhancer, digestive stimulator. It is used for seasoning vegetables, salads, sauerkraut, meat and game. Adding juniper berries to the acacia wood fire in smoking meat gives a very good taste. Externally, is used to relieve rheumatic joint pain. It is a popular raw material for alcoholic beverages.

Uses in the modern phytotherapy: Medicinal products containing juniper berries are used to increase the amount of urine to achieve flushing of the urinary tract as an adjuvant in minor urinary tract complaints and for symptomatic relief of digestive disorders such as dyspepsia and flatulence.



Flax

Latin name: *Linum usitatissimum* L., flax

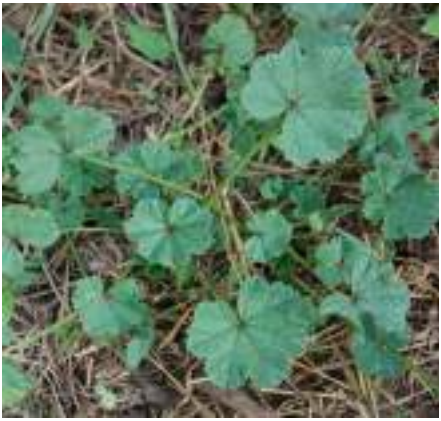
Local names: len, lan, ćeten

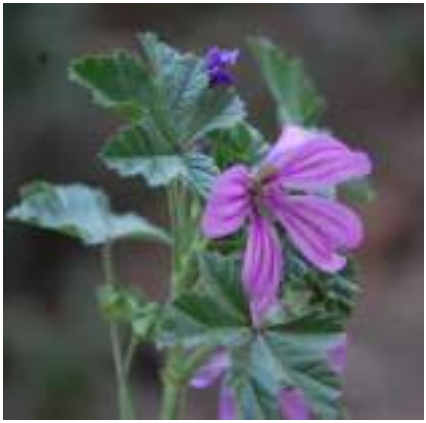
Habitat, and plant parts used: It is an ancient crop which it is cultivated in the region but also grows wild in fields, along the roadside and on forest edges. Flax seeds, and less often the flower, are used in phytoterapy.

Medicinal uses or other uses in the region: Flaxseed is a gut intestinal regulator, laxative. Grinded flax seed is used to treat pyogenic skin lesions. The flowers of flax have a slight calming effect. Linseed is grown to extract fatty oil.

Mode of preparation: Flax seeds are crushed and the flour is made into a paste (cooked in water or milk) and used for the maturation of boils. Fibers from the stems, mixed with eggs were used externally to heal fractures. The flower, and often the whole flowering shoot, is used to fill pillows to promote better sleep.

Uses in the modern phytotherapy: Medicinal products containing flexseed are used as a demulcent preparation for the symptomatic relief of mild gastrointestinal discomfort.





Tall Mallow

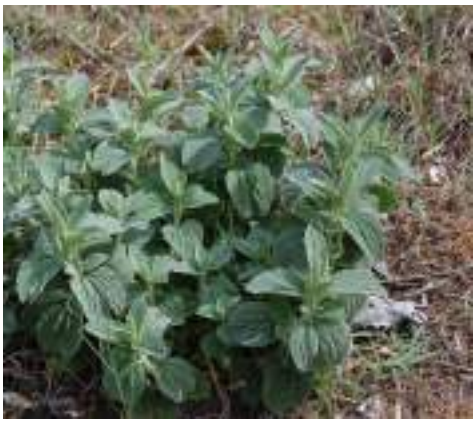
Latin name: *Malva neglecta* WALLR., common mallow
Malva sylvestris L., tall mallow

Local names: mályva, papsajt, mali slez, crni slez

Habitat, and plant parts used: It is a common plant for fresher, nutrient-rich grasslands and fallow land. It is also found in weedy places, forest edges, roadside edges, and on debris sites. Its leaves and roots are collected.

Medicinal uses or other uses in the region: Tea made from the leaf is used to treat stomach cramps, and its root cooked in milk is used to treat throat and guts. Many people ate their fruits while being children.

Uses in the modern phytotherapy: Medicinal products are used as a demulcent preparation for the symptomatic treatment of oral or pharyngeal irritation and associated dry cough, and as a demulcent preparation for the symptomatic relief of mild gastrointestinal discomfort.



Common Horehound

White Horehound

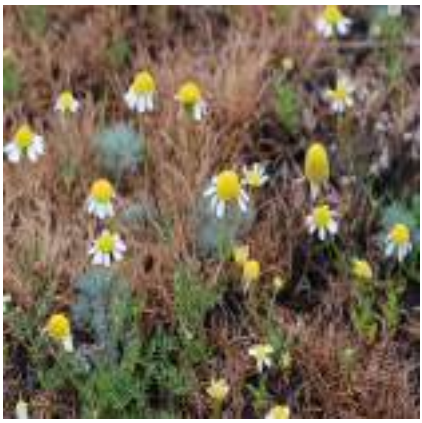
Latin name: *Marrubium vulgare* L., common horehound
Marrubium peregrinum L., white horehound

Local names: pemete fű, pemetefű, fehér pemete, očajnica, gorčika, tetrljan

Habitat, and plant parts used: It can be found in dry pastures, sunny fields and roads in the wild, although lately it has become very scarce due to chemicals. The *Marrubium vulgare* has now become a threatened species in Hungary. At the end of June, flowering shoots are collected.

Medicinal uses or other uses in the region: Its tea is used as a cough suppressant, and expel catarrh. The herb is used to prepare the well-known horehound candy, which, due to its pleasant taste is used to relieve cough, hoarseness and bronchitis.

Uses in the modern phytotherapy: Medicinal product are used as an expectorant in cough associated with cold, for symptomatic treatment of mild dyspeptic complaints such as bloating flatulence, and in temporary loss of appetite.



Chamomile

Latin name: *Matricaria recutita*, L., chamomile

Local names: kamilla, orvosi székfű, székfű-virág, széki fű, kamilica, titrica

Habitat, and plant parts used: It is found in wild on sodic area, on pastures, along roads, canals, pits, in old fields, but also on arable land. If the spring is warm chamomile blooms in late April, otherwise it blooms in May. Its inflorescence is collected.

Medicinal uses or other uses in the region: Its tea is soothing, immune-boosting, antiinflammatory and antiseptic. It relieves gastrointestinal discomfort. Its aqueous extract is used externally as a compress to treat eye inflammation and wounds and in case of cold it is used as a bath, inhalation, or to heal sore throat and cough. Used internally, its tea has antispasmodic, antiinflammatory, digestive and carminative effects. It can also be used as a massage oil. It is also used to bleach the hair. Chamomille tea can be given to newborns' regularly and also added to the bath water. In veterinary medicine, the 1-2-week-old poultry is given a chamomile tea.

Uses in the modern phytotherapy: Chamomille medicinal products are used as expectorant in cough associated with cold, for symptomatic treatment of mild dyspeptic complaints such as bloating, flatulence and in temporary loss of appetite.

Lemon balm

Latin name: *Melissa officinalis* L.

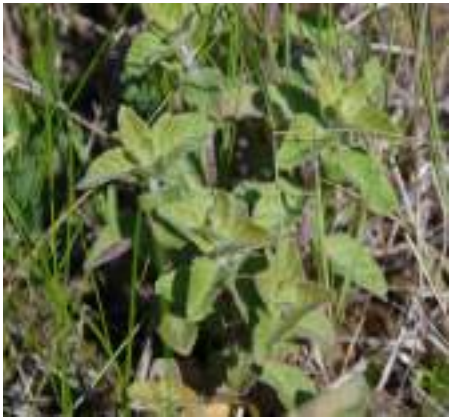
Local names: citromfű, mézfű, matičnjak, limunka, pčelinjak

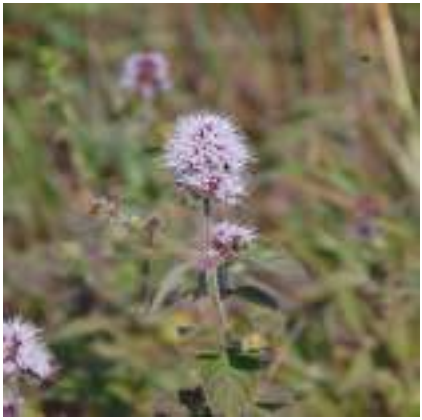
Habitat, and plant parts used: In wild lemon balm can be found in wet oak forests, but it is also cultivated in gardens. Dried leaves and shoots are used.

Medicinal uses or other uses in the region: Tea is used as a soothing, stress relieving, digestive stimulant, antiemetic agent as well as in case of gastrointestinal complaints, sore throat and for cough suppression.

Mode of preparation: Pour the boiled water over the lemon balm (1.5-4.5 g) allow to stand for 10 minutes and filter and enjoy in delicious tea.

Uses in the modern phytotherapy: Relief of mild symptoms of mental stress and to aid sleep, symptomatic treatment of mild gastrointestinal complaints including bloating and flatulence.





Water Mint

Latin name: *Mentha aquatica, Mentha x piperita* L.

Local names: *Mentha x piperita* L. – menta, pitoma, paprena, ljuta ili gajena nana; *Mentha aquatica* – vodena nana

Habitat, and plant parts used: Mint is usually grown in gardens but it spreads well, so it also can be found in the wild, especially in wet habitats.

Medicinal uses or other uses in the region: Mint tea has antiseptic, anticatarrhal effect, and it is also used for liver, bile and digestive problems. Mint essential oil is used for headaches and wound healing.

Mode of preparation: Tea can be made from fresh or dried leaves. Fresh leaves are usually added to soft drinks or lemonade and are used to prepare mint biscuits, lemon and mint cakes, smoothies and sauces. Mint leaves and essential oil can be used for inhalation, added to hot baths and in mouthwashes too.

Uses in the modern phytotherapy: Mint leaves are used for the symptomatic relief of digestive disorders such as dyspepsia and flatulence and also applied for the treatment of spasms of intestine and bile. The essential oil can be used to treat common cold and upper respiratory tracts problems because of its expertorant properties.

White mulberry

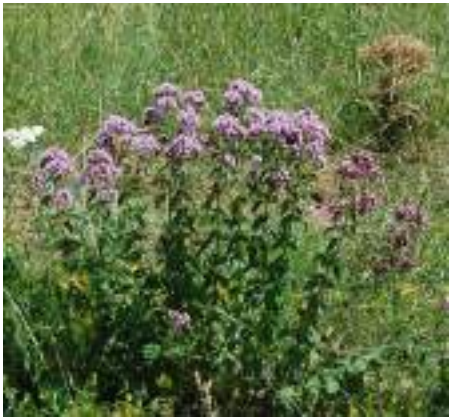
Latin name: *Morus nigra* L., *Morus alba* L.

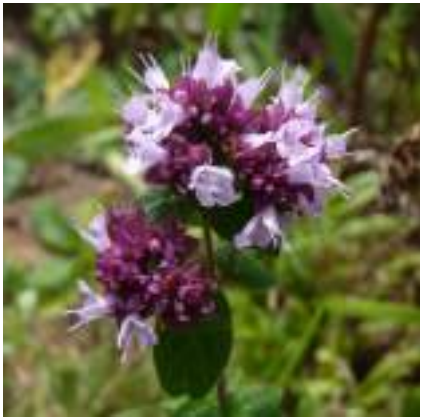
Local names: eperfa, fekete eper, fehér eper, crni dud, beli dud, murva

Habitat, and plant parts used: Mulberry was introduced in Hungary in the 19th century in order to breed silkworm. It was also planted as a roadside tree in the Southern Great Plain. Nowadays it can be found in gardens and in the wild. Leaves of mulberry are collected from spring to autumn.

Medicinal uses or other uses in the region: The decoction of mulberry leaves is used against gallstones. Mulberry tea stabilizes blood glucose level and helps the pancreas functioning. It plays an important role in prevention and treatment of diabetes. Fruits can be collected to make delicious marmalades, syrups, drought and alcoholic beverages.

Uses in the modern phytotherapy: Black mulberry fruit, leaves and bark is used traditionally, but not in the modern phytotherapy. All traditional indications lack sufficient scientific data supporting their safety and efficacy at this time.





Oregano

Latin name: *Origanum vulgare* L.

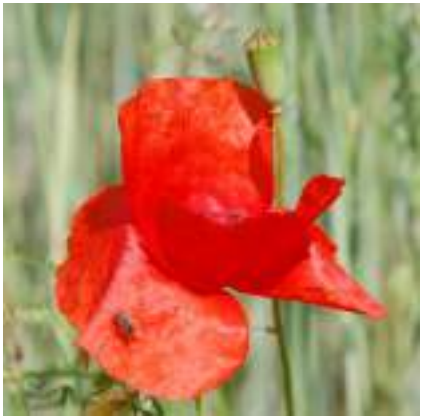
Local names: szurokfű, origano, vranilova trava, vranilovka

Habitat, and plant parts used: It occurs in dry lawns and forest edges. Above-ground and flowering parts are collected and used.

Medicinal uses or other uses in the region: Above-ground part of oregano is dried and tea is used for colds, coughs and sore throats. It is also used for diarrhea and menstrual cramps and often used as a herb.

Mode of preparation: One tablespoon of dried oregano is boiled with 250 ml of water and it can be drunk 2-3 times a day.

Uses in the modern phytotherapy: Traditionally, oregano has been used to treat respiratory and gastrointestinal disorders. It has expectorant, spasmolytic activity and immune system strengthening, and digestive properties.



Corn Poppy

Latin name: *Papaver rhoeas* L.

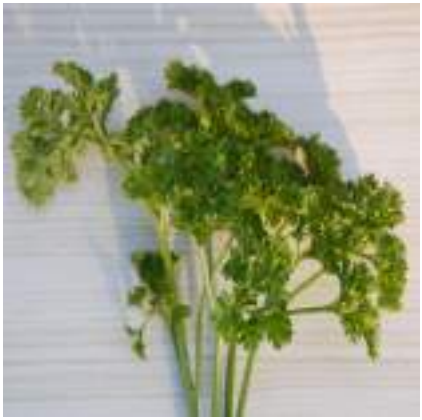
Local names: pipacs, bulka, turčinak

Habitat, and plant parts used: Corn poppy grows in arable and cereal fields, but it is also planted as ornamental plants in gardens. The petals of the poppy flower are collected.

Medicinal uses or other uses in the region: Corn poppy tea is recommended in case of anxiety and cough of nervous origin. It is an antimucus and antitussive agent. The petals are used to make sweaty tea. It has a calming, heart-strengthening effect and relieves menstrual cramps.

Mode of preparation: Syrup is made from fresh petals while tea is made from dried petals. Wildflowers are collected in bouquets and used for decoration. Sometimes it is used to make bath salts. Kids were using buds as toys.

Uses in the modern phytotherapy: Corn poppy is not used in modern phytotherapy but can be used as a decorative coloring agent for tea blends.



Parsley

Latin name: *Petroselinum crispum* (Mill.) A.W. Hill

Local names: petrezselyem zöld, petrezselyem, peršun, ak, zelen

Habitat, and plant parts used: Parsley is grown in kitchen-gardens, both leaves and roots are collected and used.

Medicinal uses or other uses in the region: Parsley leaf is used as a diuretic in cases of kidney problems, fluid retention (edema). It has an appetite boosting effect. Chopped parsley is also used as a seasoning in soups, vegetable sauces and fillings. Leaves and the root of parsley are used as diuretic and kidney cleaner. Tea made from fresh leaves is used to fash face for beautiful skin. Reduces high blood pressure. The special wine is prepared for different heart ailments called wine for the heart. RECIPE: The handful of parsley is cooked in white wine, and when filtered and cooled is mixed with honey.

Uses in the modern phytotherapy: Parsley herb and root preparations are used for flushing out the urinary tract and for preventing and treating kidney gravel. Other indications are flatulent dyspepsia, dysuria, and rheumatic conditions.

Scotch pine

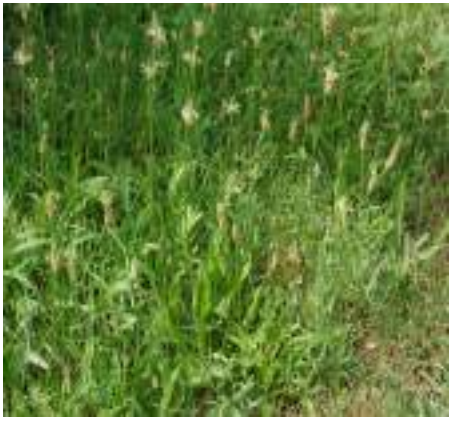
Latin name: *Pinus sylvestris* L.

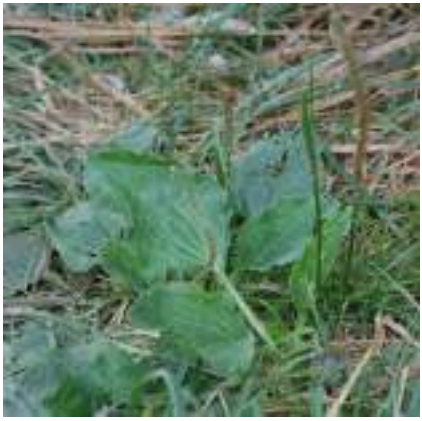
Local names: erdei fenyő, beli bor, divlji bor, obični bor

Habitat, and plant parts used: It is a plant of pine forests and rock forests, which is not native to the region but is widely planted. Leaves and essential oil of scotch pinea are used.

Medicinal uses or other uses in the region: The syrup made from spruce leaves with sugar or honey has an expectorant, anti-mucus effect. Its tea is used for colds and as an immune booster. Scotch pine in baths is good for soothing, relaxing, joint and muscle pain.

Uses in the modern phytotherapy: Essential oil of pine needle can be used for catarrhal diseases of the respiratory tract in form of inhalation. Externally is applied for rheumatic and neuralgic ailments as ointments or creams, which should be rubbed in the suffering part of the body.





Ribwort plantain

Broadleaf plantain

Latin name: *Plantago lanceolata* L., ribwort plantain
Plantago major L., broadleaf plantain

Local names: *P. lanceolata*: kígyónyelv, muška, uskolista bokvica *P. major*: kereklevelű útifű, széles útifű, ženska, širokolista bokvica

Habitat, and plant parts used: It can be found on the roadside, along ditches, in the pasture, usually in wet places, but also in gardens. Leaves are used.

Medicinal uses or other uses in the region: Syrup or tea taken internally has an antitussive, antimucus effect, and relieves sore throat. It is also referred to as an immune-boosting, antiinflammatory but also sedative agent. When applied externally, fresh leaves help in wound healing and relieve bleeding.

Mode of preparation: Homemade syrup can be prepared. The leaves are layered with sugar or honey in a jar and set in the sun or dug into the ground for months. Tea is made from fresh or dried leaves. The boiling water is poured on the leaves, allow to stand for 10 minutes and consumed 2-3 times a day. Fresh leaves of the broadleaf plantain are used to treat wounds. The crumpled leaf is placed on the cleaned wound, calluses or insect bites.

Uses in the modern phytotherapy: Leaves can be used as a demulcent for the symptomatic treatment of oral or pharyngeal irritations and associated dry cough.

Black poplar

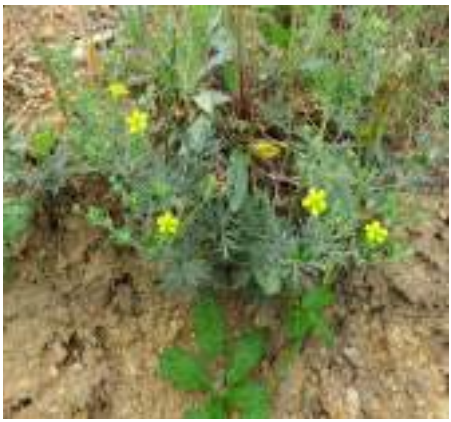
Latin name: *Populus nigra* L.

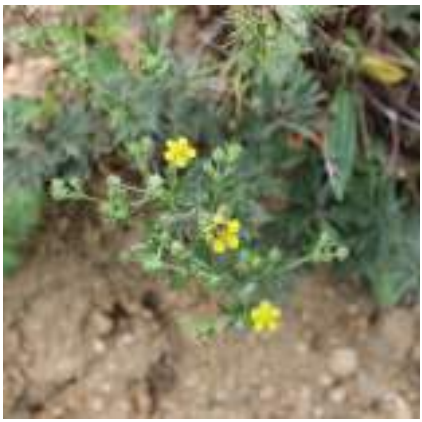
Local names: nyárfa, jegenye-nyárfa, crna topola, divlja topola, jagnjeda

Habitat, and plant parts used: Black poplar is a plant of riverine woodlands. It is dominant in natural forests and is often planted. Fresh buds are used.

Medicinal uses or other uses in the region: A hair ointment is prepared from the fresh buds, which is believed to help hair growth. In case of colds, it is part of the bath water together with other plants.

Uses in the modern phytotherapy: Poplar bud is approved for use for the treatment of superficial skin injures, external hemorrhoids, frostbite, and sunburn. External preparations also soothe and heal other skin conditions and injures, and gargling with preparations from poplar bud has been shown to relieve laryngitis.





Silver Cinquefoil

Silkweed

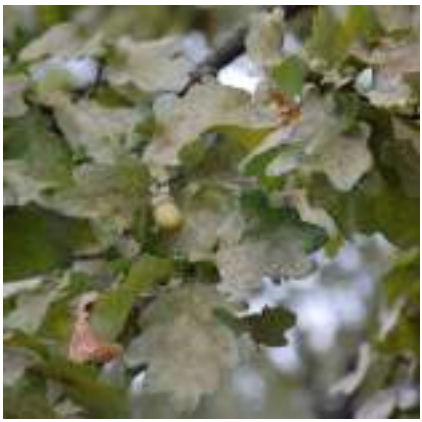
Latin name: *Potentilla argentea* L. (silver cinquefoil)
Potentilla anserina L. (silkweed)

Local names: Potentilla anserina L. - petoprsta steža, srcepuc, bezanka; Potentilla argentea L. - srebrnasti petoprst, petoper, libafű, Szent-Antal fű

Habitat, and plant parts used: The silkweed is plant of wet meadows, and goose pastures. The silver cinquefoil occurs in dry grasslands and pastures. Flowering shoots of plants are collected.

Medicinal uses or other uses in the region: Blossoming shoot tea is used to relieve cough and asthma symptoms and has anti-inflammatory effects.

Uses in the modern phytotherapy: Silkweed (*Potentilla anserina*) can be used for the treatment of diarrhoea, and wounds in the mouth. Silver cinquefoil is not used in the modern phytotherapy.



Pedunculate oak

Latin name: *Quercus robur*

Local names: tölgy, kocsányos tölgy, hrast lužnjak, rani hrast, dubica

Habitat, and plant parts used: It is dominant in natural oak woodlands; bark, leaves are constantly collected and their acorns are collected and used in the autumn.

Medicinal uses or other uses in the region: Leaf and bark tea is antiinflammatory, it is used in the case of diarrhea and gastrointestinal catarrh. Externally, it is a local haemostatic, astringent. It is also used as a bath for antiperspirant, haemorrhagic disorders and for washing oily hair.

Acorn flour is put into homemade creams.

Uses in the modern phytotherapy: Oak bark is used for symptomatic treatment of mild diarrhoea and minor inflammation of the oral mucosa or skin. It can be applied for relief of itching and burning associated with haemorrhoids, after serious conditions have been excluded by a medical doctor

Black Radish

Latin name: *Raphanus sativa* var. *niger* (Mill.) J.Kern.

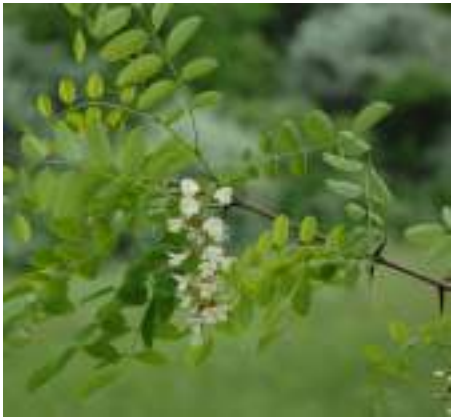
Local names: fekete retek, crna rotkva, trup, trupka

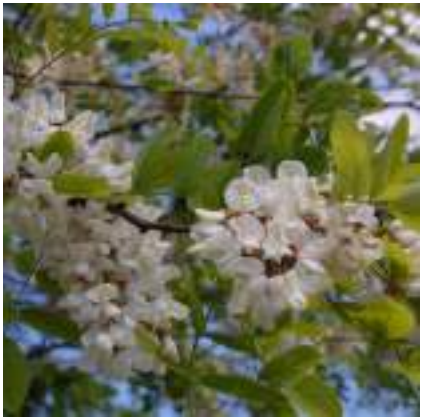
Habitat, and plant parts used: It is a cultivated plant, grown in gardens.

Medicinal uses or other uses in the region: Black radish juice is used in cases of gallbladder disease and gallstone disease.

Mode of preparation: Grated radish can be used as a compress for headaches. The inner pulp of black radish is removed and replaced with honey, after a while formed liquid is drank to treat the throat infections and to calm whooping cough. It is good for the removal of gall bladder stones.

Uses in the modern phytotherapy: On the basis of traditional knowledges black radish is used for the treatment of gallstones, different hepatic, urinary, and biliary complains and for decreasing lipids serum.





Black locust

Latin name: *Robinia pseudoacacia* L.

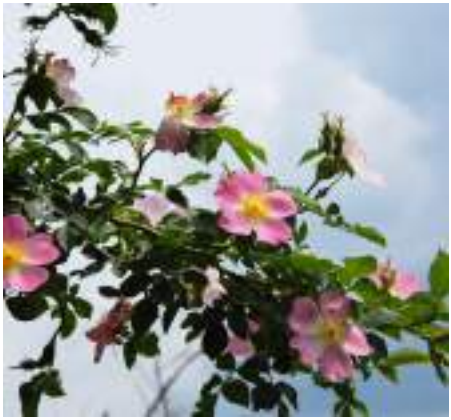
Local names: fehér akác, bagrem, akacija, gospodinov trn, belo cveće

Habitat, and plant parts used: Black locust is an indigenous tree species in America, which was also introduced in Europe and now is widespread. It is an undemanding plant, found in dry, sandy areas. Black locust gives a lot of and delicious honey. Flowers are collected, while other parts of the plant, especially the bark, are poisonous.

Medicinal uses or other uses in the region: Black locust flower tea is used for colds, relieves respiratory problems, and it is, similarly to elderberry, antitussive, and anti- catarrhal. It is also used to prevent heartburn. It is considered to be an appetite suppressant and can be used in dieting. In the past black locust leaves were placed on wounds to heal and relieve bleeding.

Mode of preparation: Black locust flower can be eaten raw or delicious tea and soft drink can be made from it. It is often used in salads, syrups, or baked in pancake or beer dough. Tea is prepared from dried flowers too. The wood of black locust is a good firewood, and it is often used to make various tools.

Uses in the modern phytotherapy: It is not used in modern phytotherapy. There is only one indication that tea made from flowers reduces the acidity of the gastric juice and the tone of the stomach wall.



Dog Rose

Latin name: *Rosa canina* L.

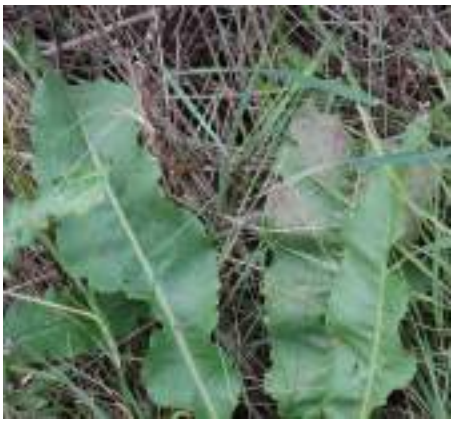
Local names: csipkebogyó, vadrózsa, csipkerózsa, šipak, divlja ruža

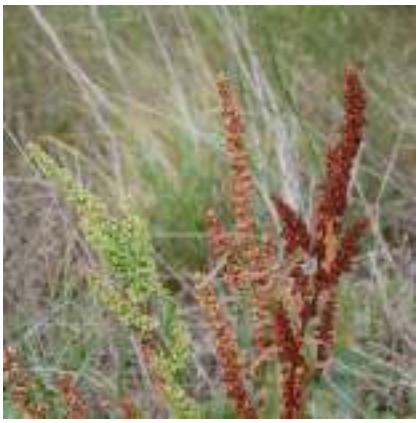
Habitat, and plant parts used: Dog rose grows on forest edges, along shrubs, on pastures and can be found in abundance on the farmlands in the coutryside. The false fruit (rosehips) is picked when it is red, but still hard to squash. The flowers are also used occasionally.

Medicinal uses or other uses in the region: Rosehips are well known for their high Vitamin C content. They are frequently used to relieve the symptoms of the common cold and flu. It boosts the immune system and is also said to have other beneficial effects such as helping in breaking up kidney stones and wound healing.

Mode of preparation: Rosehip tea is most commonly prepared by crushing the false fruit and soaking it in warm water. The water should not be boiling hot, since the heat speeds up the decomposition of the vitamin C content. After the rosehips are removed from the warm water, they are sometimes also boiled and then the two types of tea are mixed together. Other uses include drying and grinding the rosehips and mixing it into yoghurt. It is also edible in raw state, whithout special preparation, when ripe. Sometimes it is also used to make wine. The petals can be candied or cooked as jam.

Uses in the modern phytotherapy: Dog rose hip is used in the modern phytotherapy as vitamin C supply, as adjuvant in the treatment of common cold and influenza. It is applied for flavouring herbal tees. Recently, rose hip is used as adjuvant in alleviation of symptoms of osteoarthritis





Yellow Dock

Latin name: *Rumex crispus* L.

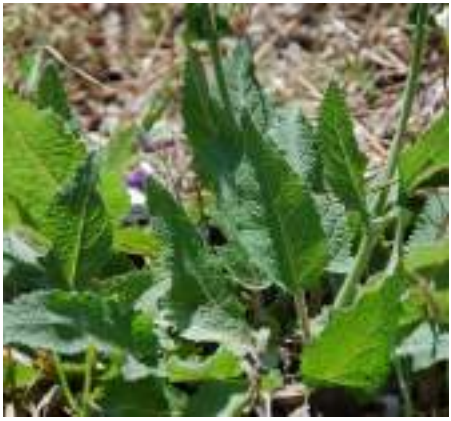
Local names: lósóska, vadsóska, sóslórom, štavelj, poljsko zelje, kiseljak, kiselica

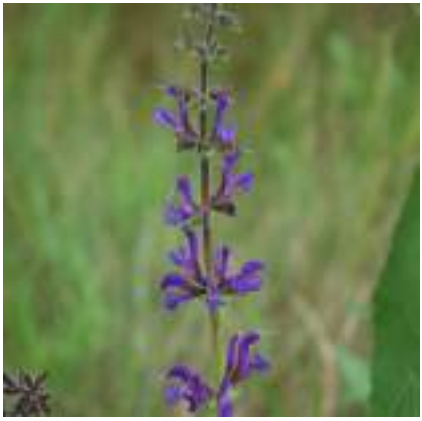
Habitat, and plant parts used: Yellow Dock is a widespread species that grows on wet meadows, alongside creeks, in meadows. Leaves are used freshly cut and its seeds are also collected.

Medicinal uses or other uses in the region: Yellow Dock leaves and seeds are known for their antidiorreal effects. They were used for the treatment of humans and household animals. However, the veterinary use is more common nowadays. It was formerly also used to treat scabies.

Mode of preparation: Its dryed seeds, and less commonly its fresh leaves, are used to make tea to treat diarrhea. The young leaves can be used in salads. It can also be used as forage, to fed pigs.

Uses in the modern phytotherapy: Yellow dock is not used in the modern phytotherapy. According to certain information the tea prepared from the seed is laxative, and can be used for the treatment of mouth sores.





Meadow sage

Latin name: *Salvia pratensis L., Salvia officinalis* L.

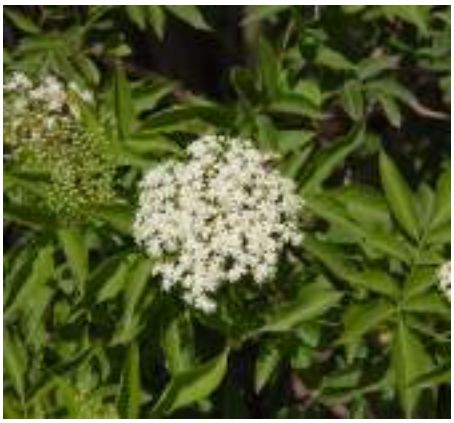
Local names: *S. pratensis L.* – kerti zsálya, divlja, livadska žalfija; *S. officinalis* L. – zsálya, žalfija, kadulja

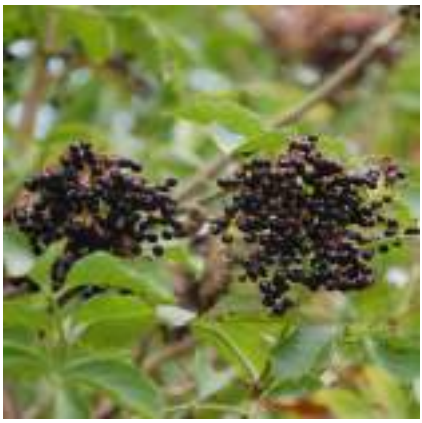
Habitat, and plant parts used: Meadow sage grows abundantly on dry grasslands. As a mediterranean plant, sage thrives in the warm and sunny parts on the garden. It survives long in cultivation and sometimes goes wild in dry places. Leaves can be collected during almost a whole year and can be used fresh or dried.

Medicinal uses or other uses in the region: The leaves are used to treat oral infections and inflammation of teeth, throat and tonsils. The leaves are boiled and inhaled or gargled in the mouth. It is also used as a tea to relieve menstrual pains and discomforts caused by menopause. Sage leaves have antiperspirant properties.

Mode of preparation: Sage leaves are used as a spice, both dried or freshly cut (also in spice mixtures or aromatic salts). Other uses include sage drops, where extract is used. Adding sage to the bathing water is recommended when feeling weakness. A sage mouthwash can be made by adding 2.5 grams of sage leaves to 1 dl of boiling water. After cooling, the mixture is filtered and gargled cold.

Uses in the modern phytotherapy: Sage tea is used for the symptomatic treatment of inflammations in the mouth or the throat as a rinsing solution. It can be applied for symptomatic treatment of mild dyspeptic complaints such as heartburn and bloating, and for the relief of excessive sweating. It exerts mild spasmolytic effect.





Black elder

Latin name: *Sambucus nigra* L.

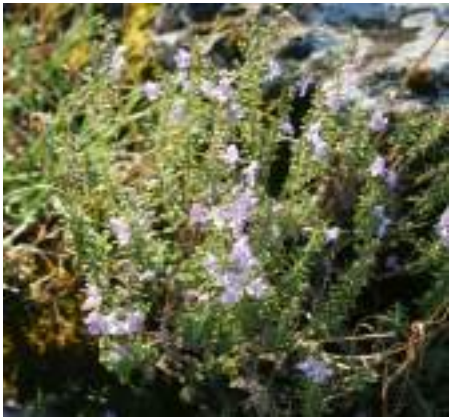
Local names: bodza, bodzavirág, zova, bazga, baz, bzova

Habitat, and plant parts used: Black elder is a plant of damp forests, shrubs, fallow lands and roadside edges. It prefers nutrient-rich soils, but lives also on poor soils. Black elder grows wild in a many places, but it also appears in gardens and farmyards. Inflorescences and ripe fruits are harvested.

Medicinal uses or other uses in the region: Consumption of elderberry is recommended for colds and bronchitis but it also exerts a good diaphoretic and antitussive effect. Elderflower is a diuretic, while marmalade made from ripe berries has a mild laxative effect. Immature berries can cause nausea and diarrhea.

Mode of preparation: Elderflower lemonade is a very popular summer drink which is made from fresh inflorescences by cold maceration and flavored with lemon, sugar or honey. Dried flowers are usually prepared as an infusion. Syrup and jam is made from the ripe fruit, but dried fruits are also preserved. Elderflower inflorescence is often baked in pancake dough.

Uses in the modern phytotherapy: Herbal medicinal products are traditionally used for the relief of early symptoms of common cold because of its expectorant and diaphoretic activity.



Summer Savory

Latin name: *Satureja hortensis* L.

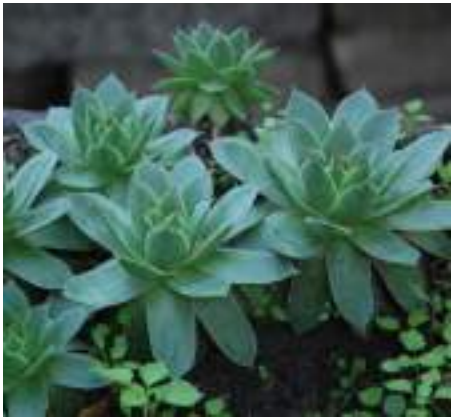
Local names: borsfű, borsikafű, csombor, csombord, csömbör, bécsi rozmaring, borsfű, borsika, borsos szátorja, szádorja, csomberbors, hurkafű, kerti méhfű, kolbászfű, babfű, čubar, kubar, osogriz, čubrika, čubrica

Habitat, and plant parts used: It is grown in gardens as a herb. The above-ground portion is used.

Medicinal uses or other uses in the region: It is used as a digestive aid when eating puffs. Soaked in warm wine, it is also used to relieve stomach pain. It is used as a seasoning for mushroom dishes, salads, gherkin and aqueous cucumbers, and as pepper substitutes in dietary foods.

Mode of preparation: In case of colds, it is used in combination with other plants (poplar, thyme, basil, black locust flower) to make bathing water.

Uses in the modern phytotherapy: Savory is used in traditional medicine worldwide due to its antifungal, antibacterial and antioxidant properties.



Common Houseleek

Latin name: *Sempervivum tectorum* L.

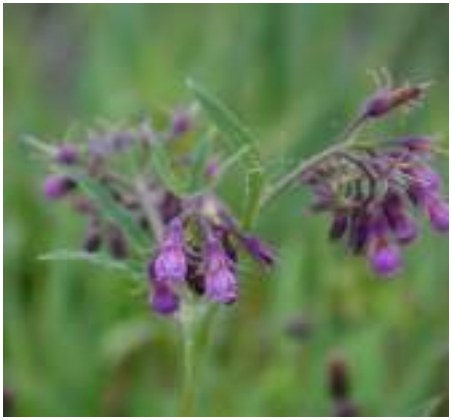
Local names: kövirózsa, kőrózsa, fülfű, fülbeeresztő fű, čuvarkuća, čuvarka, pazikuća, vazdaživa, stolist, grluša

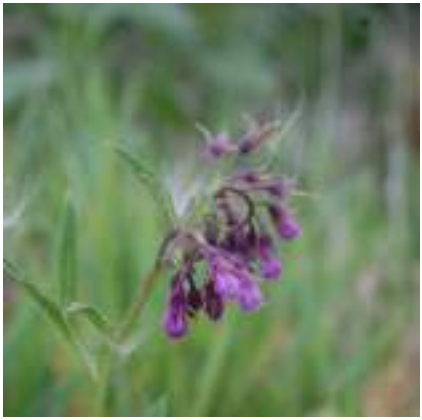
Habitat, and plant parts used: It lives on rooftops, stone walls, is planted in rock gardens, but easily goes wild. The letter and the juice of the letter are used.

Medicinal uses or other uses in the region: It is used to treat ear inflammation. It is also used in case of eye diseases.

Mode of preparation: Fresh leaf juice is used to treat ear infections.

Uses in the modern phytotherapy: Based on traditional medicine, houseleek is used to treat ear inflammation. It can be applied as a pack on wounds, sores, burns, and abscesses and also on painful areas attacked by gout as a refrigerant and adstringent.





Comfrey

Latin name: *Symphytum officinale* L.

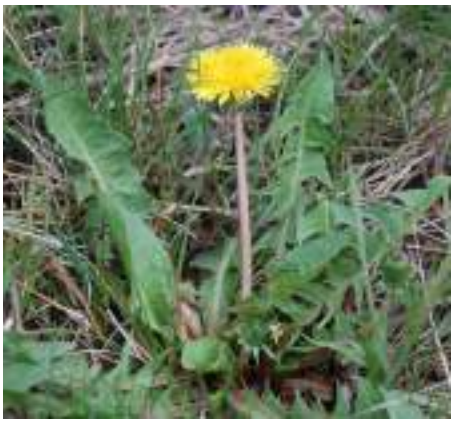
Local names: fekete nadálytő, nadálytő, csontforrasztó fű, gavez, crni gavez, veliki gavez

Habitat, and plant parts used: It thrives in all kinds of wet habitats: groves, marshland, meadows and reeds. It can be found on the banks of the Maros river in the floodplains and other marshy regions. It indicates regions which are well supplied with freshwater. The roots are used in phytoterapy and traditional medicine, rarely leaves.

Medicinal uses or other uses in the region: Both the roots and thee leaves are used to treat all kinds of injuries, such are: bruises, sprains, fractures, lesions, frostbite, sports injuries and hematomas. Usually the tincture is applied on the injured region. The leaves are used to make tea which is then used to remedy arthritis and rheumatic pains in the form of a hot compress.

Mode of preparation: The tincture is made by soaking the roots in alcohol. The roots are first washed, cleaned and cut to pieces. The pieces are then dried, milled and mixed with oil. This oil is then applied to the injured parts. The finely cut leaves or roots can also be added to lard to make creams and wraps.

Uses in the modern phytotherapy: Comfrey root is used for the symptomatic relief of minor sprains and bruises. Warning! Not to be used internally, on damaged skin and for more than 10 days. The use in children and adolescents under 18 years of age is not recommended.



Common Dandelion

Latin name: *Taraxacum officinale* Weber ex. Wigg.

Local names: pitypang, gyermekláncfű, maslačak, baba marta, gologlavica, žutenica

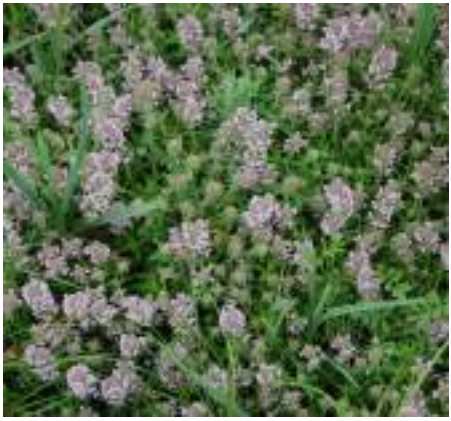
Habitat, and plant parts used: A plant of fresh, wet grasslands, roadside edges, and weed associations. Common in meadows, pastures, lawns. Its root and its aboveground blooming part are used.

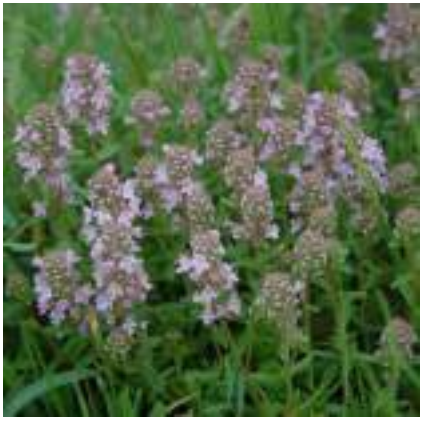
Medicinal uses or other uses in the region: It has a protective effect on the liver, improves bile function and has an immune boosting effect. Also, it is used for rheumatic complaints and skin diseases. Flower syrup is used for respiratory problems. Root tea is recommended as a diuretic. Stems are recommended for diabetics.

Young leaves are put in salads. The flower is used to make a syrup for bees. The children make necklaces and bracelets from the peduncle.

Mode of preparation: It is believed that 10 peduncle a day should be consumed to cleanse the liver.

Uses in the modern phytotherapy: Dandelion can be used for increasing the amount of urine, and to achieve flushing of the urinary tract as an adjuvant in minor urinary complaints. It is recommended for relief of symptoms related to mild digestive disorders (feeling of abdominal fullness, flatulence, slow digestion), and temporary loss of appetite.





Wild Thyme

Latin name: *Thymus vulgaris* L., *Thymus serphyllum* L.

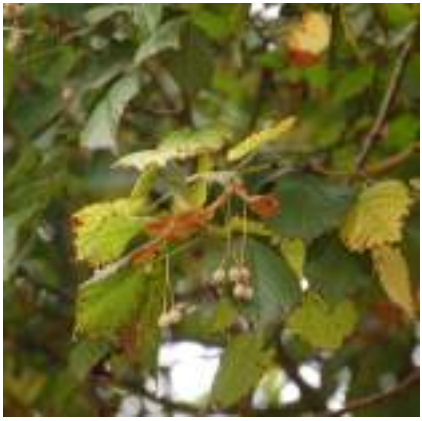
Local names: *Thymus vulgaris* L. – kakukkfű, majkina dušica; *Thymus serphyllum* L. - timijan

Habitat, and plant parts used: The common (*T. vulgaris*) and wild thyme (*T. serpyllum*) both grow on loose rocky and often sandy soil. Wild thyme can be found on rocky slopes, arid sand steppes, roadsides and on the side of dikes. It can be easily obtained in agricultural stores.

Medicinal uses or other uses in the region: It is used both as a spice and a tea. Commonly used as a cough supressor but also has beneficial effects on the digestive system and is used to treat indigestion. It is also used to relieve earache. Thyme can help to treat common cold, flu and to strengthten the immune system in general. Its essential oil is used in mixtures to treat injuries. As a spice it is used to flavor meat and tomato based dishes.

Mode of preparation: It can be used both dried and freshly cut. 1-2 grams can be used to make a hot infusion which can be ingested multiple times a day. Thyme oil is made by soaking the plant in olive oil. After filtration, obtained oil is used to treat earache. A piece of cotton wool is soaked in olive oil and put in the ear while waming the ear with salt bags. When soaked in seasame oil it is used as a cosmetic product and for the scalp massage

Uses in the modern phytotherapy: Thyme and wild thyme products are used against productive cough associated with cold, and for the treatment of upper respiratory tract catarrh as expectorant in form of tea or inhalation.



Small-leaved Linden

Latin name: *Tilia cordata* Mill.
Tilia platyphyllos Scop.

Local names: kislevelű hárs (*T. cordata*), nagylevelű hárs, pozna, sitnolisna lipa (*T. platyphyllos*), hársfa, kőhárs, rana, krupnolisna lipa

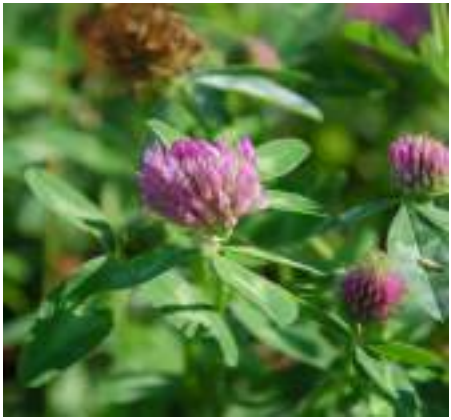
Habitat, and plant parts used: Linden lives in fresh forests, frequent trees in settlements, parks and gardens. Inflorescence are collected together with the bracts, rarely the tender leaves.

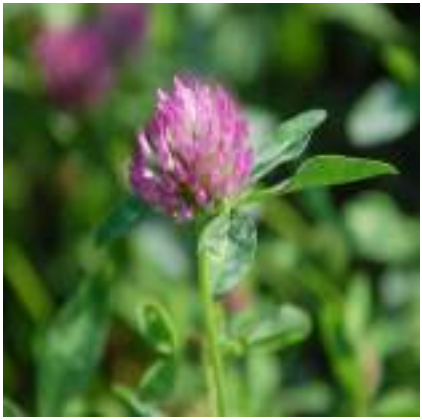
Medicinal uses or other uses in the region: Tea is used in case of colds as it improves sweating, mucus releasing and acts as antitussive. The scald made from it is used in febrile colds. It is also used in rheumatic diseases, stomach problems, and restlessness.

Its dried inflorescence is used in honey. They also make liqueurs and syrups. The young leaf is eaten as a salad.

Mode of preparation: The tea is brewed from the dried inflorescence (2-4 g per day) and left to stand for 5-7 minutes with the addition of hot water. Tea should be consumed immediately! If using fresh inflorescence, the scald should be left for a shorter period.

Uses in the modern phytotherapy: Herbal medicinal products are used for the relief of symptoms of common cold, and for the relief of mild symptoms of mental stress.





Common clover

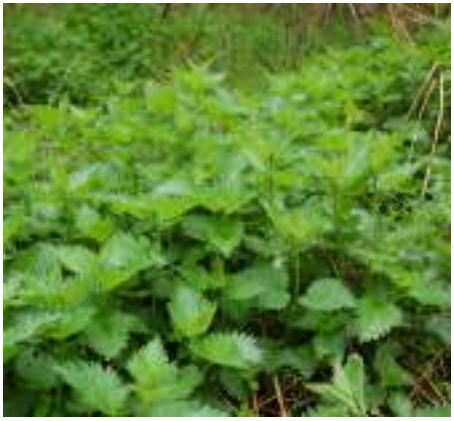
Latin name: *Trifolium pratense* L. and other *Trifolium* species

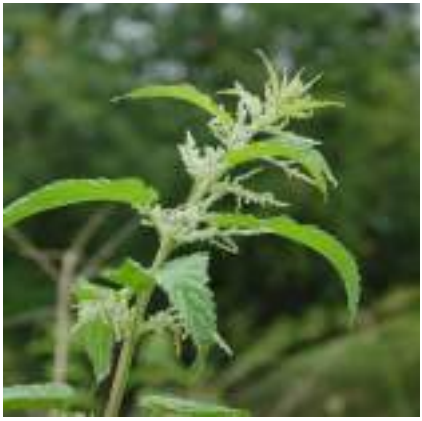
Local names: here, lóhere, fehérhere, vöröshere, vadhere, detelina, crvena detelina

Habitat, and plant parts used: It can be found on dry grasslands, floodplain and saline meadows, forest clearings and gardens. The leaf and the above-ground portion are used.

Medicinal uses or other uses in the region: Its dried flower is used in baths for joint and rheumatic diseases. Massage oil is used to increase circulation and to treat sore muscles. Above ground part of the plant in blossom is used in the treatment of cold, mainly as diaphoretic and also in various inflammation processes and bacterial infections. Clover is important fodder.

Uses in the modern phytotherapy: Common clover is not used in the modern phytotherapy. Its phytoestrogen activity is well-known, therefore it has beneficial effect on bone metabolism and menopausal symptoms.





Stinging nettle

Latin name: *Urtica dioica* L., Stinging nettle

Local names: csalán, kopriva, velika kopriva, žara

Habitat, and plant parts used: Nettle grows in fields, along roadsides, around houses; it is a very widespread, almost cosmopolitan species. Leaves, herbs, roots, rarely the seeds of nettle are collected.

Medicinal uses or other uses in the region: Nettle is one of the region's favorite plants with a wide variety of uses. Nettle root tea is used in rheumatism and joint disease, against gout, bladder problems and gastritis. Fresh whole herbs are used traditionally after bathing for whipping body parts in the treatment of ischialgia, rheumatism and muscle pain. Nettle also lowers blood glucose levels. The dried herb is used to prepare tea, spice salts and bathing salts. Tea is used as a tonic, to strengthen the body, and a decoction made from the roots or the leaves is effective against hair loss. It is also consumed as a food, with its young shoots made into salads or smoothies. Nettle soup, and vegetables are also made, and it is used for flavouring butter on bread. It is recognized as a bio-sprayer and is used to make manure. *Mode of tea preparation*: 2 g of the comminuted herbal substance in 150 ml of boiling water as a herbal infusion, 2-3 times per day.

Uses in the modern phytotherapy: *Leaf*: Leaves are used for relief of minor articular pain, and to increase the amount of urine to achieve flushing of the urinary tract as an adjuvant in minor urinary complaints. *Herb*: Herbs are used as diuretics in adjuvant therapy of minor urinary complaints, and for relief of minor articular pain. It can be used for the treatment of seborrhoeic skin conditions. *Root*: Roots can be used for the relief of lower urinary tract symptoms related to benign prostatic hyperplasia after serious conditions have been excluded by a medical doctor.

Mullein

Latin name: *Verbascum thapsus* L.
Verbascum phlomoides L.

Verbascum densiflorum Bertol.

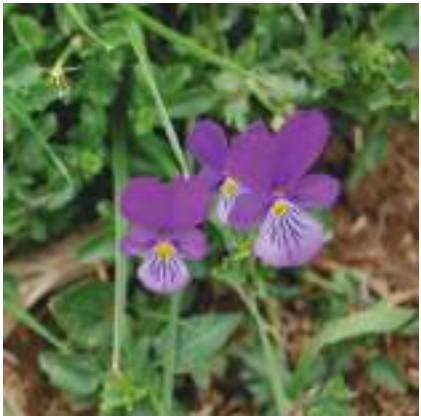
Local names: ökörfarkkóró, divizma, divlji tabak, svećnik, žutocvet

Habitat, and plant parts used: Mullein is common in pastures, dry grasslands, fallow land and weed communities. Flower buds are collected with the stamens on it.

Medicinal uses or other uses in the region: Tea made from mullein flower is anti-tussive, antimucus and effective against respiratory diseases. It is also used for siting baths against hemorrhoids and also various skin diseases. Washing and rinsing hair with mullein prevents hair loss and broken, damaged hair.

Mode of preparation: 2 g of the comminuted herbal substance in 150 ml of boiling water as a herbal infusion, 2-3 times per day.

Uses in the modern phytotherapy: Mullein is used to relieve symptoms of sore throat associated with dry cough and cold.



Wild pansy

Latin name: *Viola tricolor* L.

Local names: vadárvácska, dan i noć, viola, ljubica

Habitat, and plant parts used: It occurs on dry meadows and arable land. The herb that is collected during flowering is used.

Medicinal uses or other uses in the region: Tea is used to treat colds, as expectorant, for mucus dissolving, as antipyretic and anti-inflammatory agent in conditions affecting upper respiratory tract and asthma. Also known as blood pressure lowering agent. It is used externally to treat skin problems.

Mode of preparation: Herbal tea prepared from 3 g comminuted herbal substance as an infusion can be used 1-3 times daily for the treatment of comon cold. It is not recommended to be used by persons under age of 18 years.

Uses in the modern phytotherapy: Herbal medicinal product for symptomatic treatment of mild seborrhoeic skin conditions.

Faculty of Medicine, University of Novi Sad, DEPARTMENT OF PHARMACY

The Faculty of Medicine is one of the important University institutions. It covers wide range of research areas, including development and innovations. Among different departments, Department of Pharmacy is a scientific leader at the Faculty, with staff of various profiles (pharmacists, technologists, biologists, chemists, medical doctors) and specializations. Good mutual cooperation and connections of researchers made Department internationally significant and recognized as a good partner in many successful projects. Researchers from MFUNS have a great experience in botanical and ethno-botanical researches. Everyday professional activities make them highly experienced in controlling the quality, efficacy and safety of the medicinal plants and commercial herbal products. Furthermore great didactic experience in education and training not only students, but also collectors of medicinal plants in natural habitats makes them ideal for educators in the area of healthy living as well as in ecosystems preservation.

Public Corporation "Palic-Ludas"

As the manager of the protected areas, will provide extensive knowledge about the natural values of the target area and connection to stakeholders. Renovating the Visitor center Ludaš and creating additional contents for it will provide the means to continuously maintain and present the project results. With help of the respective partners, JPPL will establish the educational anti stress gardens, air spas and nature tracks, which will increase the tourist attraction of the target area. Four persons from JPPL will be included in the project team. Considering their experience in plant sciences, ecology and nature protection (specifically landscape architecture, horticulture and nature preservation) they will contribute to implementation of project activities. Also, their daily activities make them familiar with the designated project area, making them ideally suited to perform field activities. Their previous experience with IPA projects implementation makes their administrative capacity ready for further engagement in IPA cross border projects. The existing infrastructure that includes Ludaš Lake Visitor center provides an excellent starting point and base for project activities.

University of Szeged

The University of Szeged is one of Hungary's leading and internationally ranked higher education institutions. In the University outstanding research, development and innovation work is conducted. The education and research work is internationally competitive, and there is also a broad range of cooperation in both research and training. The research work continuing in the University is internationally significant, nationally defining, and can play an important role in cross-border cooperation. 18 persons from the University of Szeged will be included in the project team. The experiences of Department of Ecology cover the ethno-botanical field work and data analysis. The work-group of Department of Ethnology and Cultural Anthropology is familiar with ethno-ecological data collection, ethnographical fieldwork and archival researches. Colleagues of Department of Pharmacognosy have great practice in the field of literature survey on traditional plant utilization, controlling the efficacy and safety of the plant products. The team of Department of Media and Communication have practice in internationally oriented research on cultural tourism with focal points on local tourism development.

Institute of Lowland Forestry and Environment, University of Novi Sad

Institute of Lowland Forestry and Environment (ILFE) is the part of University of Novi Sad. Institute was established in 1958. ILFE has 35 employees, from which 18 PhDs in different disciplines (forestry, biology, ecology and biochemistry). ILFE is dealing with biological, ecological and environmental aspects of forest ecosystems mostly in Vojvodina region. ILFE has a very close cooperation with the State Forest and Water Management Enterprise, as well as with managers of protected areas in region of interest for project. ILFE has long tradition in establishing new forest areas (since its initial founding) and experience in advanced scientific methods, including state-of-the art GIS applications, such as 3D maping and simulations. ILFE will support of establishment several gardens for promotion of ethnobotanical ecoturism. With close colaboation with partners, ILFE will develop promotional web-page for on-line promotion and interaction of visitors with natural heritige of protected area Palic-Ludas. In that sense ILFE will have integrating role in the project through creation of the state-of-the art virtual platform that will relate gathered knowledge and results from the field (including 3D model) with end-users interest.